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ABSTRACT

This document contains validated activities and competencies needed by librarians working in a database distributor/service organization. The activities of professionals working in database distributor/service organizations are listed by function: Database Processing; Customer Support; System Administration; and Planning. The competencies are grouped under the categories of Knowledge, Skills, and Attitudes, and three professional levels are dealt with: entry level (0-3 years experience), mid-level (4-9 years experience), and senior level (10 or more years experience). (THC)

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NEW DIRECTIONS IN LIBRARY AND INFORMATION SCIENCE EDUCATION
FINAL REPORT
VOLUME 2.6
DATABASE DISTRIBUTOR/SERVICE PROFESSIONAL COMPETENCIES

1984

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VOLUME TWO: SPECIFIC COMPETENCIES

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INTRODUCTION

This document contains validated activities and competencies needed by information professionals working in a database distributor/service organization. The following operational definition of competency was developed:

> **A competency is a generic knowledge, skill or attitude of a person that is casually related to effective behavior as demonstrated through external performance criteria, where:**
>
> - **Knowledge is having information about, knowing, understanding, being acquainted with, being aware of, having experience of, or being familiar with something, someone, or how to do something.**
> - **Skill is the ability to use one's knowledge effectively.**
> - **Attitude is a mental or emotional approach to something, or someone.**

We have identified several types of knowledge that are necessary to perform information work satisfactorily as follows:

- Basic knowledge in such areas as language, communication, arithmetic operations, etc.
- Subject knowledge of primary subject fields of users served such as medicine, chemistry, law, etc.
- Library and information work environments such as the information community, its participants and their social, economic and technical interrelationships, etc.
- Knowledge of what work is done such as the activities required to provide services and produce products, etc.
- Knowledge of the organization or user community served such as the mission, goals, and objectives of the user or the organization, user's information needs and requirements, etc.

There appear to be three kinds of skills necessary to perform information work satisfactorily including:

- Basic skills such as cognitive, communication, analytical, etc.
- Skills related to each specific activity being performed such as negotiation of reference questions, evaluation of search outputs, etc.
- Other skills such as managing time effectively, budgeting and making projections, etc.

Attitudes of information professionals are found to be extremely important to work performance. We have found it useful to subdivide attitudes into:

- Dispositional attitudes toward one's profession, the organization served, one's work organization, and other people such as users and co-workers.
- Personality traits/qualities such as confidence, inquisitiveness, sense of ethics, flexibility, etc.
- Attitudes related to job/work/organization such as willingness to accept responsibility, willingness to learn, desire to grow, etc.

The activities and competencies are organized according to the functions which information professionals perform, and by professional level as displayed in Figure 1. The competencies are cumulative across professional level, i.e., competencies of mid-level professionals include entries shown at the mid-level as well as those at the entry level, etc.

It is important to understand the distinction between functions performed and positions or job titles. Our rationale behind the functional approach was that we were more concerned with what information professionals do than with what they are called. In a single-person library, therefore, the information professional will undoubtedly perform more than a single function. In using and interpreting the competency data in this document, it is important to consider the functions being performed by

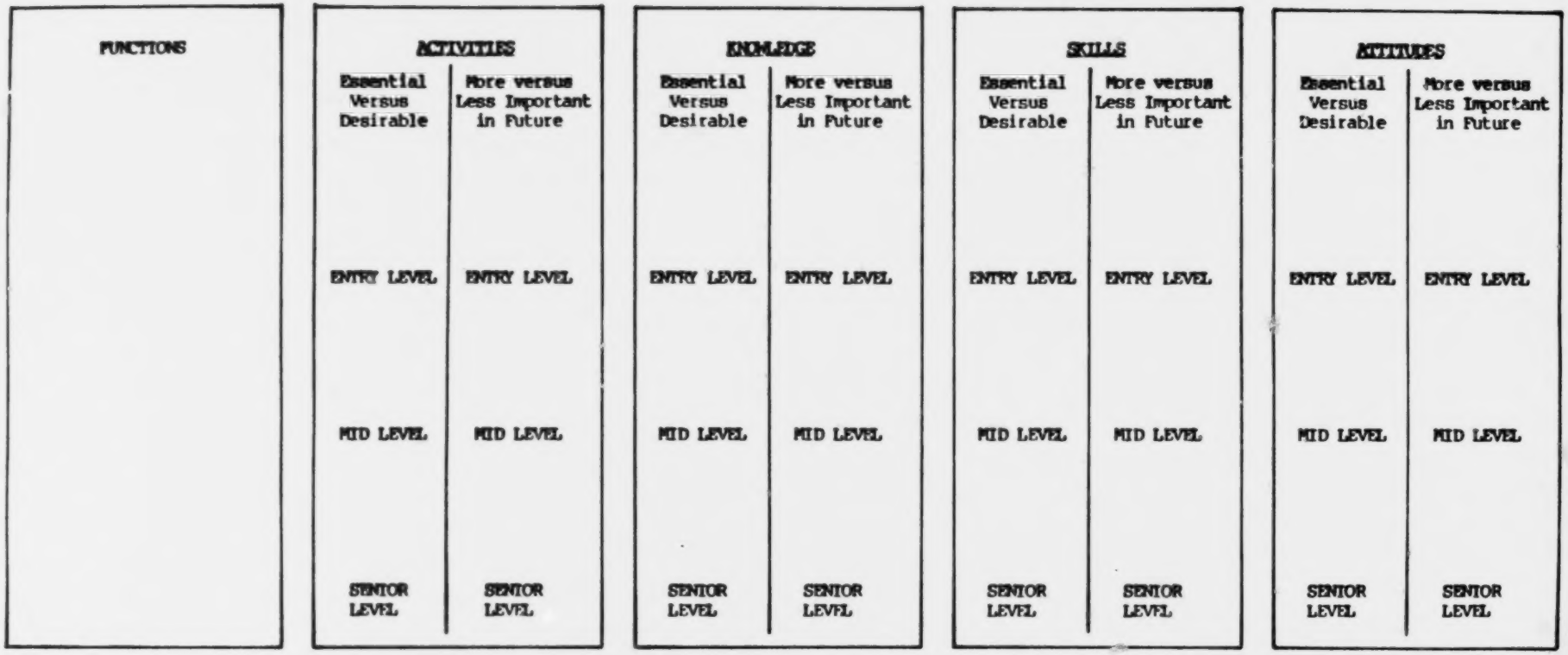

Figure 1 Organization of Activities and Competencies

professionals and the activities being performed to determine which competencies are appropriate. The functions were not broken down for professionals working in database distributor/service organizations.

Three professional levels were defined as follows:

- entry level (up to 3 years of professional experience)
- mid level (4-9 years of professional experience)
- senior level (10 or more years of professional experience).

The activities performed are listed first and numbered sequentially. The actual assignment of individual activities to subcategories of the major activities and to the functions varies from one worksetting to another. The organization of activities that we developed provided us with the "best fit" case. Indented and unnumbered activities are essentially paraprofessional activities which, in small organizations, may be performed by professionals.

ACTIVITIES

DATABASE DISTRIBUTOR/SERVICE — ENTRY LEVEL

Database Processing

1. Maintain record of receipt of magnetic tapes from database producers
2. Work with data processing staff to coordinate the regular processing of tapes received
3. Participate in database testing and file rebuilding
4. Assist mid level staff with procedures, documentation and communication to support and control regular receipt of tapes from database producers and to resolve any minor problems which may arise
5. Assist mid level staff with procedures, documentation and communication to support and control shipment of processed tapes to remote search centers and to resolve any minor problems which may arise
6. Assist mid level staff in developing and editing the master index file (a tool to help users determine which databases to search)

Customer Support

7. Assist senior staff with procedures, documentation and communication to support the implementaton of regular and special training classes, refresher workshops and system demonstrations
8. Train users in the basics of computer retrieval, equipment operation, network protocol, system protocol, search languages, query formulation and in the characteristics and searching requirements of specific databases
9. Answer customer service phones and provide users with technical advice and assistance in problem identification, search strategy, equipment operation, etc. Whenever an immediate response cannot be given, consult experts and/or investigate the problem; provide a prompt reply to the user
10. Respond promptly to users' questions/comments entered in an online comments file or received as correspondence
11. Enter news for system users in the online news files
12. To support current awareness services, run stored search formulations at specified intervals
13. Prepare all offline printouts for mailing/delivering

ACTIVITIES

DATABASE DISTRIBUTOR/SERVICE — ENTRY LEVEL

Customer Support (cont'd)

14. Forward all online orders for articles/documents to the appropriate suppliers (database producers or independent suppliers), if required

15. Assist mid level staff in developing and testing practice files for use as training aids

16. Suggest ways in which the system may be made more user-friendly

Other

17. Participate as a team member in staffing exhibits and demonstrating the system at professional meetings and conferences

18. Assist mid level staff in investigating problems related to charges to users and royalty payments to database producers

19. Participate in cross-education of staff by filling out and distributing staff alert forms describing new information discovered about the system, specific databases, specific types of equipment, telecommunications systems, etc.

20. Perform special studies, as assigned

21. Conduct business by phone, whenever appropriate

22. Write memos and letters, as required

23. Maintain a record of work performed and prepare a monthly report of activities

24. Prepare manuals of procedures

25. Make recommendations to the section manager for improvement in operations of the section

26. Attend and participate in staff meetings

27. Provide an overview of the operations of the section to visitors, as requested

28. Supervise technicians and other paraprofessional staff

29. Work to develop "esprit de corps" among staff supervised

30. Assist section manager in writing job descriptions for self and for staff supervised

DATABASE DISTRIBUTOR/SERVICE — ENTRY LEVEL

Other (cont'd)

31. Assist section manager in developing performance standards for self and for staff supervised

32. Assist section manager in the review and performance evaluation of staff supervised

33. Assist in the selection of new technicians and paraprofessionals

34. Keep abreast of developments in the information field and online retrieval, distribution of databases, telecommunications networks, and microcomputers

35. Attend professional meetings and prepare reports for dissemination to staff

36. Develop professional contacts both within and outside the parent organization

DATABASE DISTRIBUTOR/SERVICE — MID LEVEL

Database Processing

37. Keep abreast of industry-wide standards for online databases

38. Work with senior data processing staff to ensure that established standards are maintained in online files processed and distributed by the service

39. Assist data processing staff in writing the technical specifications for conversion of data supplied by database producers into the format compatible with the service's retrieval system

40. Identify additional processing of data which could result in increased search capabilities

41. Work with data processing staff and section staff to develop procedures for database testing and file rebuilding

42. Coordinate all activities related to database testing and file rebuilding by section staff

DATABASE DISTRIBUTOR/SERVICE — MID LEVEL

Database Processing (cont'd)

43. Coordinate all activities related to the regular receipt of tapes from database producers and resolution of minor problems associated with these activities; refer major problems to senior staff

44. Coordinate all activities related to the regular shipment of processed tapes to remote search centers and resolution of minor problems associated with these activities; refer major problems to senior staff

45. Coordinate the development and editing of the master index file by section staff

Customer Support

46. Function as editor and chief writer of all manuals for system users and other technical documentation describing the database service (monthly newsletters, pocket guides, fact sheets, information brochures, etc.)

47. Work with appropriate organization/contract personnel to arrange for printing of all system documentation; arrange for distribution as required

48. Coordinate all activities related to enrollment of new users of the service (distribute information packages, process applications, review equipment configurations, assign user codes, input and test codes, arrange for telecommunications linkages, etc.)

49. Develop and conduct training classes in advanced search techniques

50. Develop and maintain expertise in the knowledge and use of databases in specific subject areas

51. Develop and conduct advanced training classes for users of databases in the selected subject areas

52. Work with data processing staff and section staff to develop and test practice files for use as training aids

System Administration

53. Use computer software packages to provide the section manager with regular and on-demand statistics and management information reports

54. Run computer programs which compute the monthly bills for database service users and the monthly royalty/usage charges for database producers

DATABASE DISTRIBUTOR/SERVICE — MID LEVEL

System Administration (cont'd)

55. Forward the billing/obligation data to the appropriate fiscal control office/agent

56. Coordinate investigation of all problems related to charges to users and royalty payments to database producers; draft correspondence for the section manager's signature

57. Assess performance of existing equipment/systems/services used by section staff and investigate capabilities of other equipment/systems/services

58. Recommend acquisition of new/additional equipment/systems/services

59. Train staff in operation and in-house maintenance of equipment/systems

60. Supervise in-house operation and maintenance of equipment/systems

61. Gather information for maintenance contracts on equipment/systems

62. Draft statements of work for contract proposals for services, systems, equipment and/or maintenance

63. Evaluate contractors' proposals

64. Train and supervise entry level staff

65. Assist in the selection of new professional staff

66. Write articles for professional journals/newsletters when appropriate

DATABASE DISTRIBUTOR/SERVICE — SENIOR LEVEL

Planning

67. Work with organizational staff to identify databases which should be considered for inclusion in or addition to the database service

68. Contract for/conduct market surveys to identify the potential need, demand for and response to distribution of the various databases

69. Recommend modification of the list of databases considered for distribution based on analyses of market survey results

DATABASE DISTRIBUTOR/SERVICE — SENIOR LEVEL

Planning (cont'd)

70. Work with mid level staff, data processing staff and representatives of database producers to identify the technical requirements for data supplied by the individual producers

71. Work with representatives of the database producers to determine preliminary policies, procedures and estimated charges related to distribution of the individual databases

72. Work with legal/contract personnel to prepare, negotiate and monitor the contracts to support distribution of and reimbursement for the supplied data

73. Work with appropriate staff at remote search centers to develop policies and procedures for operation of the service at the remote centers

74. Work with mid level staff, data processing staff and representatives of the telecommunications networks to identify the technical requirements for accessing the service's retrieval system via the available networks

75. Work with the representatives of telecommunications systems to determine preliminary policies, procedures and estimated charges related to use of their networks

76. Work with legal/contract personnel to prepare, negotiate and monitor the contracts with the various telecommunications networks

77. Identify suppliers of articles and documents who will accept orders online for cited materials

78. Work with legal/contract personnel to prepare, negotiate and monitor the contracts/agreements with the various document suppliers

79. Estimate the costs which must be charged to users of the service in order to cover costs and make a profit

80. Work with marketing staff, as required, in developing the marketing strategy for the database service and in preparing ads and documentation for potential customers

ACTIVITIES

DATABASE DISTRIBUTOR/SERVICE — SENIOR LEVEL

Database Processing

81. Coordinate final validation testing of new system capabilities

82. Work with appropriate personnel to resolve major procedural problems related to receipt and processing of tapes from database producers and shipment of processed tapes to remote search centers
83. Plan and coordinate all training activites and system demonstrations for the database service (includes training of both information professionals and end-users, update workshops, and seminars on advanced searching techniques, specific databases, and databases in specific subject areas)

84. Plan and develop the objectives and general outline for each training program/demonstration with the assistance of section staff

86. Monitor and evaluate all training activities and system demonstrations by direct observation and by review of attendees' written evaluations.

86. Advise section staff of ways in which they may improve training sessions, documents, and exercises

87. Obtain input from users regarding changes to and/or improvements in the database service which they would recommend

Other

88. Arrange with the individual database producers to provide database training for selected staff of the service and to review documentation on the individual databases prepared by the service's staff

89. Prepare a listing of databases protected by copyright. Draft documentation advising system users to obtain copyright clearances from the individual copyright holders when required

90. Represent the database service as an official spokesperson at professional meetings and conferences

91. Function as a technical expert in all matters related to daily operations of the database service

92. Draft section procedures and policies; draft revisions as required

93. Flowchart and document section procedures

94. Assist section manager in on-going systems analysis of the section

DATABASE DISTRIBUTOR/SERVICE — SENIOR LEVEL

Other (cont'd)

95. Analyze statistics of section operations and prepare draft statistical reports

96. Train and supervise mid level staff

97. Assist section manager in preparing the annual budget for section operations

98. Function as section manager in his/her absence

DATABASE DISTRIBUTOR — ENTRY LEVEL

Basic knowledge

knowledge related to literacy, numeracy, communications, etc.

Subject knowledge

knowledge of the primary subject fields of users served (e.g., medicine, chemistry, law, etc.)
knowledge of foreign languages

Information Science Knowledge (Generic)

knowledge of definition, structure, and formats of information
knowledge of alternative approaches to the organization of information
knowledge of alternative approaches to retrieval of information
knowledge of alternative approaches to information management
knowledge of available and emerging information technologies and their applications
knowledge of completed and ongoing research in the field and its applicability to practice
knowledge of career opportunities
knowledge of how to learn on an ongoing basis

Knowledge about information work environments

knowledge of the expanding information community, its participants and their interrelationships (social, economic, technical, etc.)
knowledge of the variety of work settings and their organizational structures
knowledge of the functions performed within the various work settings and the services and products offered
knowledge of the users of the services and products, their characteristics and information habits

Knowledge of what work is done

knowledge of the database distribution functions, the range of services and products offered (both actual and potential)
knowledge of the activities that are required to offer the services and produce the products
knowledge of the various resources that are necessary to support the activities
knowledge of tools supporting use of the database service
knowledge of methods and techniques of online retrieval
knowledge of performance expected and how it can be measured
knowledge of job responsibilities and working conditions (e.g., range of duties, probable compensation, benefits, etc.)

KNOWLEDGE

DATABASE DISTRIBUTOR — ENTRY LEVEL

Knowledge of how to do work

knowledge of how to perform the various activities
knowledge of how to use the tools of the database service
knowledge of how to apply the methods and techniques of online retrieval and database testing
knowledge of public relations techniques
knowledge of personnel procedures

Knowledge of the organization and specific work unit

knowledge of the mission, goals and objectives of the organization
knowledge of the structure of the organization and the role of the section within the organization
knowledge of the various projects and key personnel within the organization
knowledge of the policies and procedures relevant to section operations
knowledge of the various resources available within the organization (e.g. personnel, equipment, etc.)
knowledge of the users' information needs and requirements

DATABASE DISTRIBUTOR — MID LEVEL

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greater depths of knowledge specified above
knowledge of the operations of other sections in the organization and how they relate to supporting the daily operation of the database service
knowledge in greater depth in specific subjects and in databases in those subject areas
knowledge of standards for online databases
knowledge of the contracting process, both in general and within the organization
knowledge of evaluation methods and techniques to evaluate systems, services and products

DATABASE DISTRIBUTOR — SENIOR LEVEL

greater depths of knowledge specified above
knowledge of statistical description, analysis, interpretation and presentation
knowledge of available databases and telecommunications networks to support viable operation of a database service
knowledge of the costs associated with resources (materials, personnel, space, etc.)
knowledge of cost analysis and interpretation methods
knowledge of methods of resource allocation
knowledge of standards, measures and methods for evaluating personnel
knowledge of alternative management structures and their implications for the operation of the section
state-of-the-art knowledge of research and practice in database distribution

SKILLS

DATABASE DISTRIBUTOR — ENTRY LEVEL

Basic Skills

literacy, numeracy, cognitive, analytical, communications, etc.

Skills Related to Specific Activities

Ability to:

perform each activity
teach adults
use computer and telecommunications equipment with ease
perceive the information needs of the data user
establish rapport with colleagues
communicate well by written, verbal and non-verbal means
collect, analyze and interpret data
make decisions and recommendations based on available information
work independently and in groups
develop criteria for evaluation
make effective, timely, and well-informed decisions
isolate and define problems and develop the necessary criteria and action for their solution
manage time effectively
conduct an interview
supervise staff

DATABASE DISTRIBUTOR — MID LEVEL

Skills Related to Each Specific Activity

Skills listed above are developed to a greater extent

communicate with data processing staff on a technical level
conduct meetings with individuals and groups
arbitrate and negotiate

SKILLS

DATABASE DISTRIBUTOR — SENIOR LEVEL

Skills listed above are developed to a greater extent

anticipate long-range needs of the section and of the organization
design systems and procedures to improve operations of the section and of the organization
apply methods of measurement and evaluation
budget and make projections
optimize the use of organizational and section resources

DATABASE DISTRIBUTOR/SERVICE

Dispositional Attitudes

Attitudes Toward Institutions

Respect for profession
Respect for the section
Respect for the parent organization

Attitudes Toward Other People

Toward Users

Respect users
Like people in general
Like to help people
Like to meet people
Like to make others feel comfortable
Sensitive to others' needs

Toward Others in the Workplace

Respect co-workers
Like to work with others/as a team
Like to work on own
Willingness to draw upon and share knowledge and experience with others
Supportive of co-workers
Enjoy managing/supervising others

Personal Qualities

Alertness
Assertiveness
Compassion/Kindness
Confidence
Cheerfulness
Dependability
Determination/Tenacity
Diplomacy
Emotional stability
Fairness
Flexability/Versatility
Imagination
Inquisitiveness
Leadership ability

DATABASE DISTRIBUTOR/SERVICE

Personal Qualities (cont'd)

- Neatness
- Need for achievement
- Objectivity
- Open-mindedness
- Optimism/Positive attitude
- Organization
- Patience
- Physical endurance
- Resourceful
- Sensitive/Thoughtful
- Sense of humor
- Sense of ethics
- Tolerance

Attitudes Related to Job/Work/Organization

Individual should demonstrate:

- Willingness to take/accept responsibility
- Willingness to take initiative
- Willingess to respond to authority, apply and follow policy
- Realization that there is no single "right" way to achieve the goals of the section/organization
- Desire to learn/try
- Willingness to fail
- Willingness to ask questions
- Desire to work to best of ability
- Responsiveness to time constraints
- Accuracy
- Willingness to get hands dirty
- Attention to detail
- Willingness to do clerical tasks
- Desire to follow-through
- Service orientation
- Organizational identity
- Willingness to promote parent organization and its services
- View of parent organization as part of a larger information environment
- Ability to see broad picture
- Ability to sacrifice short-term gains for long-term goals
- Political sense
- Curiosity
- Variety of interests
- Desire to grow personally
- Desire to grow professionally
- Desire to remain current in specific and general subject field
- Positive attitude toward job